



City Council Memorandum

To: Mayor Fasbender & City Councilmembers
From: Chris Jenkins, Parks & Recreation Director
Date: February 5, 2024
Item: Mississippi River Bank Erosion

Council Action Requested: Approve requested budget adjustment, accept quote and authorize staff to engage Barr Engineering to complete design and engineering to repair bank erosion.

Background Information: The bank of the Mississippi River just upstream from the Hasting Public Boat Launch, and adjacent to the Mississippi River Regional Trail (MRRT) has eroded to such a degree the trail is in jeopardy of failing and creating a sever safety hazard for trail users. Staff have completed some temporary shoring and fencing to temporarily mitigate the hazard, however a permanent repair is necessary to avoid further resource damage.

Staff shared this issue with Barr Engineering, who has provided a quote to complete the permitting process, design and engineering as well as bidding and construction services. Staff are suggesting to engage with Barr to complete this process now so that the project can be completed this spring prior to any high-water events on the Mississippi River.

Financial Impact: This \$27,300.00 cost as well as the future construction costs are unplanned yet necessary to mitigate a hazard to the public. Staff suggest using Fund Balance from Fund 200 for the design & engineering portion of the project. Staff will also investigate financial assistance from Dakota County since this erosion will damage the MRRT if left unchecked, and Dakota County has jurisdictional ownership of this trail segment.

Advisory Commission Discussion:
None

Council Committee Discussion:
None

Attachments:

- Pictures of erosion
- Barr Engineering Quote



January 31, 2024

Chris Jenkins
Parks and Recreation Director - City of Hastings
920 West 10th Street
Hastings, MN 55033

Re: Mississippi Riverbank Erosion Repair Proposal

Dear Chris:

Thank you for requesting a proposal for permitting, design, and construction support for repairing riverbank erosion on the Mississippi River. Following is a description of the tasks to perform the proposed services, along with a proposed schedule and fee.

Task 1: Permitting

Barr will coordinate with the Minnesota Department of Natural Resources (DNR) Area Hydrologist to confirm that no public water work permit would be required. This will include documentation of the project's effects on the river channel and confirmation from DNR that the project will not trigger a need for a work in public waters permit. In addition, Barr will coordinate with the United States Army Corps of Engineers (USACE) to confirm that the project can be authorized under Nationwide Permit (NWP) 13 for bank stabilization. It is assumed that the project will meet the NWP 13 general conditions and assumptions listed below.

Barr will obtain the FEMA Effective model for the Mississippi River and update the model to simulate restored conditions of the riverbank. The profile from the updated will be compared to the Effective Model to demonstrate that the bank repair does not increase the floodplain elevation. A No Rise Certification will be provided to the City of Hastings.

Assumptions:

- Only natural rock is used, between 6 and 30 inches in diameter, free of debris that may cause pollution or siltation.
- A filter of crushed rock, gravel or filter fabric material is placed underneath the rock.
- Riprap would be installed no more than 6 feet waterward of the Ordinary High Water Level (OHWL).
- Minimum finished slopes will be no steeper than 3:1 (horizontal to vertical).
- No more than 100 feet of shoreline will be disturbed by construction activities.
- No wetlands will be disturbed above the OHWL of the River.
- The discharge of riprap will not exceed an average of one cubic yard per running foot, as measured along the length of the treated bank, below the OHWL.
- The hydrology in the FEMA Effective model will not be updated.

Deliverables:

- Letter describing coordination with the DNR and USACE
- No Rise Certification

Task 2: Design

Barr designers will walk the section of Mississippi River Regional Trail between the boat launch and Lock and Dam Road to identify other locations of bank erosion. During the site visit staff will collect survey points to characterize the existing bank, area of erosion, and edge of trail.

Following the site visit, Barr will develop bidding documents to include:

- Construction drawings – one plan sheet and one typical detail sheet
- Front end documents, as needed depending on bidding requirements
- Engineer’s Opinion of Probable Construction Cost
- Technical specifications, if needed

Assumptions:

- Bidding documents will only be prepared for one area of erosion. If additional areas of erosion are identified during the site visit, additional plans can be prepared on a time and expense basis if authorized by City staff.
- Restoration is limited to topsoil, seeding, and erosion control blanket.
- City is not seeking to restore to former existing contours, just to stabilize the failure area with minimal fill and armoring with riprap.
- Construction access will utilize the existing bituminous trail, work can be done in fall or winter.
- Riprap placement on riverbanks typically has quantity overruns compared to neat line volumes per the drawings, so an increased factor will be applied when calculating estimated quantities.

Deliverables:

- Draft construction drawings for City review
- Final construction drawings for City review
- Front end documents and technical specifications
- Engineer’s Opinion of Probable Construction cost

Task 3: Bidding and Construction Services

Barr will assist the City in facilitating the bidding process, providing the bidding documents to a select group of bidders. A full public bidding is not anticipated or included in this cost, but if needed, can be facilitated at additional cost.

Barr will help the City select a contractor and administer the construction contract. Barr will review submittals, requests for information, and answer contractor questions, as necessary. Barr will perform up to 30 hours of on-site observation during construction.

Schedule

Barr will work with the City to design, bid, and construct the riverbank repair in 2024 after spring flooding.

Barr will target a completion date for Bid Package delivery to City of May 3, 2024 assuming notice to proceed by February 9, 2024.

Estimated Cost

The scope detailed above will be performed on a time and materials basis for an estimated **\$27,300** and invoiced every four weeks. We will not exceed the budget without authorization from you. Table 1 summarizes the estimated project work by task.

Table 1 Estimated project cost

Task	Description	Estimated Cost
Task 1	Permitting	\$5,500
Task 2	Design	\$11,900
Task 3	Bidding and Construction Services	\$9,900
	Total	\$27,300

Please contact Brandon Barnes (952-832-2737, bbarnes@barr.com) if you have any questions about our scope of work or estimated budget.

Sincerely,



Brandon Barnes, PE
Vice President